

What is claimed is:

1. A radiation image information recording/reading apparatus comprising:

an image recording unit for recording radiation image  
5 information in a stimulable phosphor sheet by irradiating radiation representing the radiation image information on the sheet;

stimulating-ray main scan means for carrying out main scan of the sheet having the radiation image information therein with excitation light irradiated from a side opposite a side  
10 of irradiation of the radiation;

vertical scan means for relatively moving either the stimulable phosphor sheet or the stimulating-ray main scan means to the other in a direction crossing a direction of the main scan;  
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photoelectric detection means for detecting phosphorescent light emitted from an area in the sheet on which the excitation light have been irradiated, from a side of irradiation of the excitation light and from a side opposite  
20 of the radiation irradiation; and

erasing means for releasing residual radiation energy from the sheet after reading the light, prior to recording of another image in the sheet by the image recording unit, wherein

the excitation light main scan means comprises a linear  
25 light source for emitting the excitation light in the form of fan beams, and the photoelectric detection means comprises a

line sensor.

2. A radiation image information recording/reading apparatus as defined in Claim 1, wherein

the stimuable phosphor sheet is a stimuable phosphor sheet having a stimuable phosphor layer and a reflection layer for reflecting the phosphorescent light and

the stimuable phosphor sheet is scanned with the excitation light in a state where the stimuable phosphor layer is located closer to the excitation light main scan means and the reflection layer is located farther from the excitation light main scan means.

3. A radiation image information recording/reading apparatus as defined in Claim 1, wherein

the stimuable phosphor sheet is an anisotropic stimuable phosphor sheet for restricting spread of the excitation light and/or the phosphorescent light within the sheet.

4. A radiation image information recording/reading apparatus as defined in Claim 2, wherein

the stimuable phosphor sheet is an anisotropic stimuable phosphor sheet for restricting spread of the excitation light and/or the phosphorescent light within the sheet.

5. A radiation image information recording/reading apparatus as defined in any one of Claims 1 to 4, further comprising:

a radiation absorption plate placed close to a surface of the sheet on the side opposite of the side of the radiation

irradiation at the time of the radiation irradiation on the  
sheet and moved away from the sheet after the radiation  
irradiation.